

Abstract of the Disclosure

An optical channel power equalizer for equalizing the per-channel power levels of a multi-channel optical signal is provided. The channel power equalizer includes an optical spectrum measurement unit that extracts a portion of the 5 amplified optical signal and measures the per-channel power levels of the extracted optical signal; a controller that compares the measured power levels with a predetermined reference value, and determines to output the degrees of attenuation per channel based on differences between the measured per-channel power levels and the reference value; and a per-channel optical attenuation unit that attenuates 10 the per-channel power levels of a plurality of input optical signals based on the degrees of attenuation and outputs the attenuated optical signals as the plurality of channels.